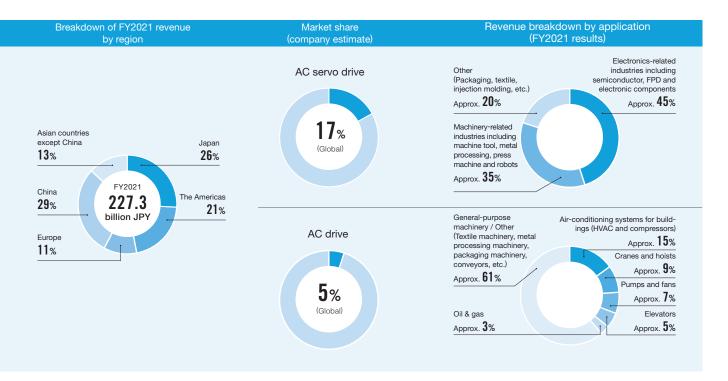
At a Glance

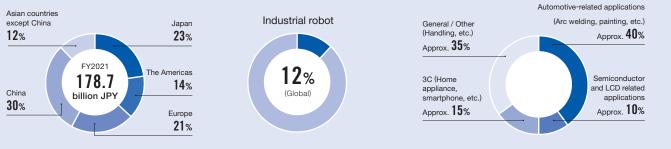
The Yaskawa Group deploys the technology and knowhow of the highest global standards to its products and services through business activities in the three core business segments of Motion Control, Robotics and System Engineering.

FY2021	MOTION CONTROL	
Revenue 479.1 billion JPY	AC servo & controller business	Enhancing machine performance as major compo- nents incorporated in production equipment
Operating 52.9 profit billion JPY		A 11.71. 71
Operating profit ratio 11.0%		AC servo Σ-X series
Revenue breakdown by business segment	Drives business	Contributing to sustainable development of society and industry by realizing energy-saving and higher perfor- mance of machinery through optimum motor control
Revenue 479.1 billion JPY		Yaskawa AC drive new series Matrix converter U1000 PM motor
	ROBOTICS	
Motion Control48%Robotics37%System Engineering11%Other4%	 Arc welding robots Spot welding robots Painting robots Handling robots 	Responding to the growing need for labor-saving and automation at production sites, we are taking on the challenge of realizing a new industrial automation revolution
Revenue breakdown by region 31%		Robot controller YRC1000 Arc-welding robot MOTOMAN-AR1730 Collaborative robot MOTOMAN-HC20DT
Revenue	SYSTEM ENGINEERING	
479.1 billion JPY 69%	 Social system business Environment & energy business Industrial automation drive business 	Supporting prosperous life and society through tech- nologies and proven performance accumulated over a century
Japan31%The Americas17%Europe16%China26%Asian countries except China10%		Electrical system for steel plant Generator and converter for large scale wind turbines PV inverter



 Breakdown of FY2021 revenue by region
 Market share (company estimate)
 Revenue breakdown by application (FY2021 results)

 Asian countries
 Automotive-related application





MOTION CONTROL

AC Servo & Controller Business

AC servo drive's role in manufacturing digital transformation

In the manufacturing industry, it is important to analyze and utilize various data obtained from equipment in order to improve productivity.

AC servo drive is a key component that is built into and drive a variety of equipment used in manufacturing. By making AC servo drive, which controls the movement of equipment (motion), function as a sensor and acquire various data from the equipment, it is possible to provide new added value to manufacturing, such as preventive maintenance of equipment and improvement of production quality.

Yaskawa provides customers with technologies and products based on the concept of "i³-Mechatronics," which "realizes a new industrial automation revolution" by data utilization to improve productivity. In 2021, we released the YRM-X series controllers, which connect AC servo drive Σ -X series and data and use them to achieve this high level of performance.

Overview of FY2021 performance

- High demand for semiconductors in Japan, the United States, South Korea, China and other countries
- China saw growing demand for lithium-ion batteries, and 5G related products, such as smartphones and base stations.
- Significant revenue growth in the Motion Control segment due to aggressive global capital investment
- Profits increased in the Motion Control segment due to an increase in revenue and the effects of switching to new products despite the impact of higher raw material and logistics costs.

SWOT analysis of business

Strengths: Strengths of Our Business and Differentiation

- Developed the world's first "minertia motor" which is the prototype of the current servo motor in 1958
 World-class performance and quality
 - Brand value as global No.1 market share
- Hold strong relationships of trust with leading companies in various manufacturing equipment
 - Contributing to the advancement and performance of machines through the pursuit of leading-edge technologies
- Practice of i³-Mechatronics
 Realization of new automation revolution

Opportunities: Business Opportunities

- Growing demand for industrial automation
- Industry sophistication, including 5G, IoT, and autonomous-driving
- Adoption of EVs in the automobile industry

Weaknesses: Challenges

- Speed-up of the process from development to mass production
- Reinforcement of production response to rapid changes in demand

Threats: Business Risks

- Supply chain disruptions associated with geopolitical risks
- Pricing strategies by manufacturers in emerging countries
- Emergence of an actuator that can surpass the motor in performance and have the potential to replace the motor

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06



Kenji Ueyama Senior Executive Officer General Manager, Motion Control Div.

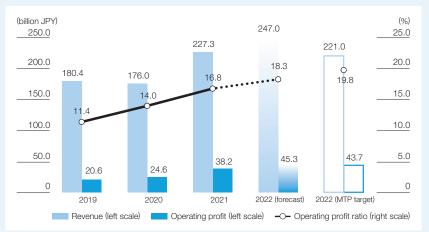
Measures to address issues and risks

- Further evolution of i3-Mechatronics and steady uptake of demand in the semiconductor-related market, which is expected to grow rapidly in the future, and growth markets such as lithium-ion batteries and 5G in China
- Speed up the process from development to mass production and achieve technological improvements that will surpass the manufacturers in emerging market through YASKAWA Technology Center (YTC)
- Strengthen the deployment of the Yaskawa Solution Factory production system at each production base, as well as reinforce parts procurement capabilities and expand in-house production to better respond to rapid changes in demand

"Challenge 25 Plus" Goals

Establish a global No.1 position as a leading company by further evolving "i³-Mechatronics" solution capabilities and expanding the range of components that respond to the changes in production systems, and by building a highly profitable structure

Trends in performance, forecast and target of mid-term plan (Motion Control segment)



Progress of "Challenge 25 Plus" and FY2022 measures

	Progress of measures (up to FY2021)	FY2022 measures
Development	\bullet Commercialization of AC servo drive $\Sigma\text{-}X$ series and YRM-X controllers	 Expansion of AC servo drive Σ-X series' lineup
Production	 Realization of visualization of production information at factories in Japan and China 	 Increase production capability by strengthening parts procurement and increasing in-house production
Sales	 Expansion of projects for production cells and data utilization Strengthened relationships with customers and created sales opportunities through top marketing activities 	• Capture growth markets with new products and expand the scale and the number of projects through i^3 -Mechatronics with the key YRM controllers, MECHATROLINK-4, and Σ -X
Profitability improvement	 Increased productivity of global indirect operations by applying the latest production method 	 Strengthen the deployment of Yaskawa Solution Factory production system to each production base

MOTION CONTROL AC Servo & Controller Business

Toward "the realization of a new industrial automation revolution" as set out in its long-term management plan "Vision 2025," Yaskawa announced in 2017 a new solution concept, "i³-Mechatronics," which adds digital data management to existing automation solutions, and has been strengthening development toward the realization of this concept. The three "i"s represent the three steps of information utilization and are the three essential elements for realizing a smart factory.

Yaskawa believes that this order of 3 steps is important for the realization of a smart factory, and in order to combine the world's best mechatronics products with data utilization technology, it released the following two new products in 2021.

- **1 st step:** integrated: Link with IT by data
- **2nd step:** intelligent: Intelligent factory
- **3rd step:** innovative: Productivity improvement by technological innovation

O MOTION CONTROL

AC Servo & Controller Business

AC Servo & Controller Business

TOPICS 1

First in the industry! Launch of YRM-X Controller for integrated cell control

With the aim of realizing i³-Mechatronics, Yaskawa has commercialized the YRM-X Controller, which synchronizes and integrally controls various data in a "cell" made up of equipment and industrial robots at high speed, in real time, and over time.

At various manufacturing sites, initiatives to advance smart factories are accelerating, such as improving production efficiency and quality using IoT and AI, and ensuring traceability. The basis of these activities is to understand the operating status (data) of production facilities. In order to improve the production efficiency of facilities, data must be collected in an integrated and time-series manner, analyzed based on highly accurate data, and fed back to the production facilities, rather

than collected separately from the various equipment that make up the cells.

To achieve this, the YRM-X Controller, which performs integrated control of cells, and the Yaskawa Cockpit software tool, which collects and analyzes time-series synchronized data in a single operation, are linked to achieve high-speed, real-time data feedback.

The YRM-X Controller will accelerate the realization of i³-Mechatronics and further enhance the solution for customer issues and the provision of added value.

MOTION CONTROL

TOPICS 2

Launch of AC servo drive, " $\Sigma\text{-}X$ Series" to accelerate progress with industry-leading motion performance and digital data solutions

Since commercializing the industry-leading all-digital servo "AC servo drive" " Σ Series" in 1991, Yaskawa has contributed to improving the performance of various equipment and manufacturing productivity through advances in performance, functionality and miniaturization.

From now on, Yaskawa believes that transformation into an non-stop factory that enables efficient, high-quality, and stable production while responding to the various changes that occur on the production sites will be required for manufacturing. As a first step toward achieving this goal, development of AC servo drive,

which can collect, visualize, and analyze data, led to the birth of Σ -X Series.

 Σ -X Series features the industry's best motion performance and "digital data solutions starting with servo," which add sensing data utilization functions to provide even greater added value to customers.



MOTION CONTROL

Drives Business

Tatsuya Yamada Senior Executive Officer General Manager,

AC drive's role in society and industry

AC drives can continuously change the motor's rotational speed by converting the voltage and frequency of the power supply. The use of AC drive not only enables advanced motor control, but also contributes to energy saving by operating as much as necessary. AC drive is widely applied to machinery and equipment in which motors are used, and the global market is estimated to reach 1.5 trillion yen. In the past, AC drive's growth drivers were (1) the advance of electrification in line with industrial sophistication, and (2) the rise of emerging economies. In recent years, however, the energy-saving effects of using AC drive have attracted renewed attention as part of efforts to achieve carbon neutrality in countries around the world. AC drive is increasing its presence as an indispensable device for the sustainable development of society and industry.

Overview of FY2021 performance

- On the back of the recovery in the global market, sales were strong, particularly for large air conditioning systems (HVAC), cranes, and textiles.
- Demand expanded in China due to energy conservation policies
- Significant revenue growth in the Motion Control segment due to aggressive global capital investment
- · Profits increased in the Motion Control segment due to an increase in revenue and the effects of switching to new products despite the impact of higher raw material and logistics costs.

SWOT analysis of business

 Strengths: Strengths of Our Business and Differentiation Power electronics technology and high-efficiency motor technology Control and sensing technologies based on motor drives developed over many years Knowledge of how machines and facilities are used (applications) based on system engineering Worldwide sales and service bases, development centers, and production plants 	 Weaknesses: Challenges Accelerated volume expansion, growth scenario Improvement of development speed including new technologies Improvement in cost competitiveness In-house production of main parts Reducing the impact of global shortages of materials
Opportunities: Business Opportunities	Threats: Business Risks
 Expansion of energy conservation promotion policies in each country based on the sustainability codes (SDGs, carbon neutral, etc.) 	Movement toward in-house production by some customers
 Accelerate factory automation including 5G and IoT Enhancing the performance of industrial equipment through AI, etc. 	 High dependence on specific markets such as oil and gas markets

- Rise of market in emerging countries
- · Enhancement of high-efficiency motor regulations

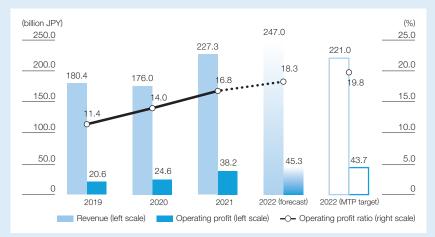
MOTION CONTROL Drives Business

Measures to address issues and risks

- Accelerate deployment of high-value-added products and solutions for emerging economies, particularly in Southeast Asia
- Enhance QCD of technologies and products by fully utilizing YTC functions
- Expand the use of substitute parts and in-house production of parts through factory reorganization
- Increase the revenue ratio of stable growth markets (HVAC, elevators, etc.) by capturing energy conservation demand

"Challenge 25 Plus" Goals

Steadily expand revenue of Yaskawa's strong area, drivingperformance-oriented applications (general machinery, oil and gas, elevators, cranes, etc.,) as well as market development for energysaving performance-oriented applications, for which demand is expected to expand in the medium term, by leveraging the proposal capabilities of PM motors and AC drive, thereby boosting growth potential



Trends in performance, forecast and target of mid-term plan f (Motion Control segment)

Progress of "Challenge 25 Plus" and FY2022 measures

	Progress of measures (up to FY2021)	FY2022 measures
Development	Commercialized flat type Eco PM motor	Accelerate replacement of tight parts
Production	Strengthened production capacity of circuit board	Improve global productivityExpand in-house production
Sales	Cultivated the next core customersAcquired HVAC orders in India and Thailand	 Penetration of new series products in the global market Capture demand for decarbonization by combining with flat type Eco PM motor
Profitability improvement	Improved PM motor profitability	Accelerate switching to new products

Drives Business

O MOTION CONTROL

TOPICS

Launched the industry's thinnest Eco PM motor flat type that reduces motor length by up to $70\%^{*1}$ and achieves IE5^{*2}, the highest level of international high efficiency standards



which is the rotating part, which leads to a better energy efficiency than a normal

induction motor. This flat type Eco PM motor does not only achieve IE5, high efficiency class, but also achieve miniaturization due to the flat structure of the motor. Combined with the compact, highly functional AC drive, we offer a variety of solutions that help customers add value to their machines and equipment.

A PM motor has a permanent magnet embedded in the rotor

Consideration for the environment is an important issue for

companies as the realization of a decarbonized society

becomes a common global goal. Yaskawa strives to reduce

global CO2 emissions by dramatically improving the produc-

tivity and energy conservation of customer equipment

through the supply of energy-saving products that utilize

*1 Compared with top runner motor excluding motor shaft length

motor and power conversion technologies.

*2 International standard for motor energy efficiency established by the International Electrotechnical Commission (IEC). IE5 is the most efficient.

ROBOTICS

Masahiro Ogawa Representative Director Senior Managing Executive Officer General Manager, Robotics Div.

Role of robots in manufacturing

Industrial robots are used to automate welding, painting, assembly and transportation in various fields, including the automotive market. In recent years, against the backdrop of labor shortages and the prevention of the spread of infectious diseases, demand has been increasing in general industrial fields such as the food, medical, pharmaceuticals, and 3C (computers, consumer electronics and communications equipment.)

In the future, manufacturing sites are expected to see a growing need for smart manufacturing, such as increasing production efficiency, improving quality, and ensuring traceability, in addition to the realization of high-mix variable-volume production. Against this backdrop, Yaskawa is taking on the challenge of realizing an industrial automation revolution by further enhancing the judgment and work abilities of robots, contributing to further automation and optimization at existing manufacturing sites, and providing new automation solutions in areas where robots have traditionally been difficult to apply.

Overview of FY2021 performance

- In the automobile sector, which is the main market, capital investment was steady due to the sophistication of production and EV-related investment.
- In the general industrial sector, investment in labor saving caused by labor shortages and automation for the purpose of increasing the sophistication of production expanded globally.
- Sales of semiconductor robots performed well against the backdrop of expanding global demand for semiconductors.
- Earnings increased significantly due to an increase in revenue and improvement in capacity utilization.

SWOT analysis of business

Strengths: Strengths of Our Business and Differentiation

- Improved performance and evolving solutions through in-house production of motion control products (servo motors, drives, and controllers) that are the most important for robot performance
- · Providing the cross-divisional solution based on the i³-Mechatronics concept
- Cross-business development system utilizing YASKAWA Technology Center

Opportunities: Business Opportunities

- Expanded demand for labor saving and automation in general industries
- Manufacturing innovation in the automotive industry (including the adoption of EVs and eco-friendly system)
- Advances in robot-related technologies

Weaknesses: Challenges

 Strengthening adaptability to rapid changes in demand in production

Threats: Business Risks

- Global shortage of materials and rising material costs
- Decline in demand for capital investment due to geopolitical risks
- Rise of emerging manufacturers

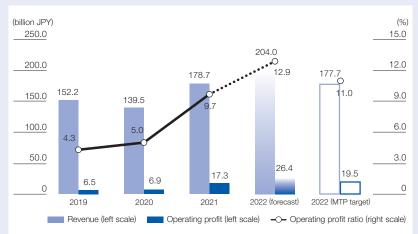
ROBOTICS

Measures to address issues and risks

- Further evolution of the system that enables production with minimum personnel changes in response to changes in production volume at the mother plant and its deployment to overseas production bases
- Strategic product development for the actual deployment of the i³-Mechatronics solution and strengthening partner cooperation
- Corporate-wide enhancement of supply chain strategy and expansion of in-house production

"Challenge 25 Plus" Goals

Based on our strategy to provide solutions to end users through the implementation of the "i³-Mechatronics" concept, achieve growth that exceeds the growth of the robot market by expanding our business domain, and realize a business structure in which profitability will significantly increase along with volume growth



Trends in performance, forecast and target of mid-term plan

Progress of "Challenge 25 Plus" and FY2022 measures

	Progress of measures (up to FY2021)	FY2022 measures
Development	• A new autonomous robot MOTOMAN NEXT (tentative name) was exhibited at the 2022 International Robot Exhibition for reference, aiming to expand the market by autonomous decentralized automation solutions that flexibly respond to changes in products, volume, and process, and automation of remaining manual work areas.	• Development of new products that realize the i ³ -Mechatronics concept
Production	• Automated and saved labor at the mother plant, and established a system that enables production with minimal personnel changes in response to changes in production volume	 Continue efforts to upgrade production in anticipation of global expansion Expansion of the automation field by in-house application of MOTOMAN NEXT (tentative name)
Sales	• Expanded product lineup and released products with improved usability for the general industrial market and collaborative robot market, where demand is increasing	 Increase orders by providing accurate solutions to growing markets Strengthen cooperation with partners
Profitability improvement	• Realized a business structure in which profitability increases with volume growth through improved tracking of volume fluctuations in production	• Reap the effects of a business structure in which profitability increases with volume growth

Vision and Strategy 03 Business Model Transform

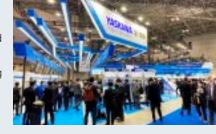
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ROBOTICS

TOPICS Exhibited at "2022 International Robot Exhibition"

We exhibited at the "2022 International Robot Exhibition" held at Tokyo Big Sight in March, 2022.

At the main solution exhibition, autonomous distributed smart factory that can flexibly respond to diverse production including high-mix variable-volume and process changes was exhibited as advanced i³-Mechatronics solution. In addition, a new autonomous robot, the MOTOMAN NEXT series (tentative name), which was unveiled for the first time, was exhibited as a reference. This is a proposal to expand the use of robots in situations where it has been difficult to introduce robots in the past by using "teaching-free," which requires no instruction. The demonstration, which can flexibly respond to changes in work content, attracted a great deal of attention and attracted many visitors to Yaskawa booth. Also, we exhibited collaborative robot's packaging and Al/applications, providing an opportunity to



promote Yaskawa's technological capabilities and products comprehensively. We will continue to propose the theme of this exhibition, "realization of smart manufacturing by i³-Mechatronics," in a variety of situations.

ROBOTICS

TOPICS 2 Cumulative shipments of industrial robots reached 500,000 units

Yaskawa shipped Japan's first all-electric industrial robot, the MOTOMAN-L 10, in 1977. Since then, our robots have enjoyed widespread popularity in Japan and overseas, with cumulative shipments totaling 500,000 units in February 2021.

Beginning with the application of robots to the automation and labor-saving of welding processes in automobile factories, we have pursued customer needs thoroughly, and in



Japan's first all-electric industrial robot

the course of our first efforts in the robotics industry, we have developed "application optimization robots" with optimized structure for each application in use and function. In addition, we have opened up new robot markets with cutting-edge technologies, such as 7-axis robots that realize the same degree of freedom as a human arm, and double-arm robots that can reproduce human tasks performed with both arms by applying this 7-axis robot. In recent years, demand for collaborative robots has been increasing in the general industrial sector as a result of a serious labor shortage and the prevention of the spread of infectious diseases. In response to the diversifying needs of manufacturing, in 2018 we began offering collaborative robots that allow workers to work next to robots.

On the site of manufacturing in the future, in addition to the realization of diversification, the need for smart manufacturing is expected to expand, such as improvement of production efficiency and quality, and ensuring traceability. Yaskawa will continue to contribute to further automation and optimization in existing manufacturing sites, and will take on the challenge of realizing an industrial automation revolution by providing new automation solutions in areas that were previously difficult to apply robots.



Collaborative robots applied at the robot factory

SYSTEM ENGINEERING

Overview of System Engineering business

The System Engineering segment consists of the environmental energy business of Yaskawa Electric Corporation and the industrial automation drive business of Yaskawa Automation & Drives Corporation*. In the environmental energy business, we are contributing to the expansion of the use of renewable energy through products such as PV inverter for solar power generation and generators for large-scale wind power generation. In the industrial automation drive business, we have developed system engineering technologies and electrical products that we have cultivated over many years. This contributes to the high productivity and stable operation of water treatment plants, large crane control, and industrial plants (textile, paper, film lines, etc.). We provide total solutions with advanced system technologies and high-quality products, and contribute to building reliable social and industrial systems, comfortable lifestyles, and a sustainable society.

* Succeeded Yaskawa Electric Corporation's social systems business from FY2022

Overview of FY2021 performance

- Strong demand for port cranes and lithium-ion battery production facilities in Asia
- Japan's steel plant-related revenue remained weak.
- Sales of electric systems for water supply and sewerage systems in Japan and electric appliances for large-scale wind power generations were favorable.
- Revenue increased year on year, mainly in the environmental and social systems business.
- Operating profit increased due to strict profitability management and continued cost control, as well as the elimination of temporary product repair costs incurred in the previous fiscal year.

SWOT analysis of business

Strengths: Strengths of Our Business and Differentiation

- Power conversion technology and automation/remote technology for energy saving and high efficiency
- Ability to respond to diversified needs such as solar and large-scale wind power generation
- Achievements in the field of electric systems for water supply and sewage and system technology development capabilities
- 100% domestic share of systems for blast furnaces in steel plants
- Share higher than 50% in port crane market in Japan, China and Southeast Asia
- Top-class share in Japan in the industrial electric business including film, textiles, and paper machinery

Opportunities: Business Opportunities

- Accelerated efforts to achieve carbon neutrality
- The market for wind power generation grows over the medium to long term, particularly for offshore wind power.
- Increasing demand for electrification of large ships
- Need for labor-saving and high-efficiency electricity systems for water and sewage systems using IoT, AI and robots
- Increasing demand for lithium-ion battery production facilities
- Full automation and remote operation of port cranes

Weaknesses: Challenges

- Improvement in cost competitiveness
- Improvement in product development speed
- Creating business synergies by integrating systems businesses
- Strengthen overseas business in growth fields (secondary batteries, cranes)

Threats: Business Risks

- Oligopolization of wind turbine manufacturers and their in-house production
- Modification of renewable energy systems and grid interconnection regulations
- Concerns over project delays and cancellations due to rising prices of materials and procurement difficulties in building equipment and facilities
- Intensifying cost competition
- Decline in infrastructure investment in Japan

06



Jiro Nakagawa President & CEO Yaskawa Automation & Drives Corp.

Measures to address issues and risks

Tatsuya Yamada Senior Executive Officer

General Manager, Drives Div.

General Manager

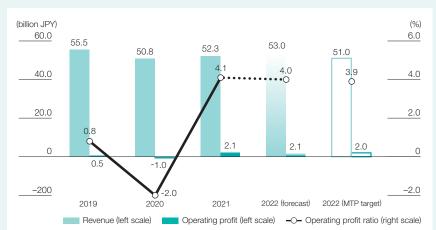
Environmental Energy Business

- Improving profitability by optimizing procurement, production systems, and cost structures and introducing new products
- Using YASKAWA Technology Center to improve technology and development speed
- Expanding the market and customer base and developing new businesses
- Providing system support for customer's manufacturing processes to achieve carbon neutrality in the steel market
- Strengthening business for Chinese and Japanese separator companies in the secondary battery market, which is a growth material market
- Follow-up to large-scale investment projects for port cranes in Southeast and South Asia
- Securing profits through establishment of efficient production system and in-house production of high-value-added products (drive panels for cranes, motors, etc.)

"Challenge 25 Plus" Goals

Strengthen profitability in the environment and energy businesses and pursue high profitability in the steel, social systems, cranes, and industrial electric (paper, film, etc.) businesses to stabilize earnings.

Trends in performance, forecast and target of mid-term plan



Progress of "Challenge 25 Plus" and FY2022 measures

	Progress of measures (up to FY2021)	FY2022 measures
Development	 Started development of PV inverter for private consumption market Realized miniaturization of induction motors and promoted development of large-capacity drive panels and integrated controllers 	 Completion of development of new PV inverter Start of development of the next integrated controller Completion of development and market launch of a drive panel for cranes
Production	 Stable supply of large generators for wind power generation Integration of product development and production of industrial drive system equipment and motors, control panel manufacturing, engineering, and after-sales service 	 Start planning to optimize procurement and strengthen production systems Expansion of in-house production of drive panels for industrial use and cranes
Sales	 Large scale orders continued for wind power generation projects. Implemented and examined value-added proposals for social systems, steel, industrial machinery, and cranes 	 Increase share in growth markets (self consumption markets) with new products Expand sales of carbon neutral systems in the steel market Accelerate sales expansion into globally growing markets such as harbor cranes and rechargeable batteries
Profitability improvement	 Strengthened approaches to EV-related and high- profit markets, and withdraw from unprofitable areas Improved added value through cost reduction 	 Increase profitability by introducing new products Increase earnings by expanding in-house production of electrical equipment for cranes (drive panels and motors)